

- LOWRY, D.C. 1970. Geology of the Western Australian part of the Eucla Basin. *Geol. Survey of West. Aust. Bull.* 122; 201pp.
- MARTINDALE, J. 1980. The warden's report: 1977-1979. Eyre bird Observatory Report 1977-1979: 4-40.
- MINTON, S.A. and MINTON, M.R. 1981. Toxicity of some Australian snake venoms for potential prey species of reptiles and amphibilians. *Toxicon* 19: 749-755.
- SHEA, G. and MILLER, B. 1986. The occurrence of *Hemiergis initialis* (Werner 1910) (Lacertilia: Scincidae) in South Australia. *Trans. Roy. Soc. South Aust.* 110: 89-90.
- SMYTH M. and SMITH, M.J. 1974. Aspects of the natural history of three Australian skinks, *Morethia boulengeri*, *Menetia greyii* and *Lerista bougainvillii*. *J. Herpetol.* 8: 329-335.
- SHINE, R. 1985. The reproductive biology of Australian reptiles: a search for general patterns. Pp. 297-303. In: *The Biology of Australasian Frogs and Reptiles*. Eds: G. Grigg, R. Shine and H. Ehmann. Surrey Beatty and Sons, Chipping Norton, N.S.W.; 527pp.
- STORR, G.M. 1988. The *Diplodactylus ciliaris* complex (Lacertilia: Gekkonidae) in Western Australia. *Rec. West. Aust. Mus.* 14: 121-133.
- WRITTEN, G.J. and CONVENTRY, A.J. 1984. A new lizard of the genus *Amphibolurus* (Agamidae) from southern Australia. *Proc. Roy. Soc. Vict.* 96(3): 155-159.

**ACACIA CYPEROPHYLLA VAR. OMEARANA,
A NEW VARIETY OF "MINNI RITCHI" ACACIA
FROM THE PILBARA REGION OF WESTERN AUSTRALIA.**

By B.R. MASLIN Western Australian Herbarium,
P.O. Box 104, Como, W.A. 6151

ABSTRACT

A spectacular new Pilbara wattle, *Acacia cyperophylla* var. *omearana*, is described and illustrated. Trees of this variety are distinctive on account of their orange to orange-brown "Minni Ritchi" bark and their weeping branchlets and foliage.

INTRODUCTION

The purpose of this paper is to formally describe a spectacular new variety of the "Minni Ritchi" species *Acacia cyperophylla* ("Red Mulga"). This variety occurs in the Pilbara region of Western Australia where it is known from only a single population.

"Minni Ritchi" is the common name given to a very distinctive type of bark which occurs in a small group of Australian species of *Acacia* and is unique on account of its colour and the manner in which it exfoliates from the stems. "Minni Ritchi" bark varies in colour from deep red to reddish purplish, reddish brown, coppery or orange, and with age it commonly turns grey (where it may persist as a stocking at base of the main trunks as in *Acacia cyperophylla*). The bark peels off the trunks and branches in short,

thin, narrow shavings which curl back on themselves from both ends. A similar sort of bark occurs also in *Eucalyptus caesia* (see Brooker and Hopper 1982). Curiously, the base of the main trunks on some species of "Manzanita" (*Arctostaphylos*; family Ericaceae) from Californian also possess a "Minni Ritchi" type of bark.

There are 16 described "Minni Ritchi" species of *Acacia* in Australia, 13 of which occur in Western Australia, namely, *Acacia chisholmii* (N.T. and Qld), *Acacia curranii* (Qld and N.S.W.), *Acacia cyperophylla* (W.A., N.T., S.A. and Qld), *Acacia delibrata* (W.A.), *Acacia effusa* (W.A.), *Acacia ephedroides* (W.A.), *Acacia fauntleroyi* (W.A.), *Acacia gracillima* (W.A.), *Acacia grasbyi* (W.A.), *Acacia inophloia* (W.A.: bark partially "Minni Ritchi"), *Acacia lysiphloia* (W.A., N.T. and Qld), *Acacia monticola* (W.A., N.T. and Qld), *Acacia desmondii* (N.T.: "Minni Ritchi" bark confined to ends of branchlets), *Acacia oncinophylla* (W.A.), *Acacia rhodophloia* (W.A., N.T.) and *Acacia trachycarpa* (W.A.). Additionally there are three or four Western Australia "Minnie Ritchi" taxa which have as yet not been formally described. The W.A. "Minni Ritchi" species are found throughout the drier parts of the State, especially in the Kimberley, Pilbara and north-central wheatbelt regions.

Most "Minni Ritchi" species occur in the section *Juliflorae*, i.e. species with multinerved phyllodes and cylindrical flowering spikes. The only exception to this is *Acacia monticola* which occurs in section *Plurinerves*, i.e. phyllodes multinerved and flowers in globular heads.

ACACIA CYPEROPHYLLA

Acacia cyperophylla ("Red Mulga") was originally described in 1864 by the British botanist George Bentham who based the name on two collections made last century by the famous explorers A.C. Gregory and F.W.L. Leichhardt. However, as discussed by Pedley (1978) it appears that the Leichhardt specimen is in fact *Acacia curranii* and was probably collected in 1844 from north of Miles in south-east Queensland. The "true" *Acacia cyperophylla* is represented by the Gregory specimen which was probably collected in 1858 at Coopers Creek in the far north-west of South Australia.

Acacia cyperophylla has a scattered distribution (usually along water courses) in arid regions of south-west Queensland and adjacent Northern Territory and South Australia. It occurs again much further west in Western Australia where it is most common in the station country south of the Hamersley Range to the Murchison River. Recently it has been discovered near Wiluna and also near Onslow. The distribution of typical *Acacia cyperophylla* which is given in Maslin & Pedley (1982) needs to be modified to include the following grid cells: 144, 178, 189, 193, 203 & 207. The new variety described below occurs north of the Hamersley Range on grid cell 148.

The Western Australian populations of typical *Acacia cyperophylla* differ slightly from those in eastern Australia in the following ways. Calyx tube is glabrous (although the lobes are fringed by minute white hairs) whereas in eastern Australia it is puberulous; pods are usually 4-5 mm wide (very rarely 7 mm) whereas in eastern Australia they are 6-8 mm.

Early literature records of *Acacia cyperophylla* from Western Australia are erroneous. For example, in 1917 J.H. Maiden provisionally referred a flowering specimen which he collected from Comet Vale (near Kalgoorlie)

to *Acacia cyperophylla*. However, this was later shown to be *Acacia sibina* (see Maslin 1977). Likewise, the specimens which Pritzel (1904) thought was *Acacia cyperophylla* is in fact *Acacia linophylla*. In the absence of seeing the specimens that Fitzgerald (1904) ascribed to *Acacia cyperophylla* it is hard to say what their true identity is. However, they are certainly not *Acacia cyperophylla* because Fitzgerald described the calyx lobes as being spatulate (in *Acacia cyperophylla* the sepals are united to form a gamosepalous calyx which has short, more or less triangular lobes).

Key to varieties of *Acacia cyperophylla*

Ultimate branchlets and phyllodes pendulous; pods 7-9 mm wide

var. *omearana*

Ultimate branchlets not pendulous, phyllodes +/- erect; pods usually 4-5 mm wide (6-8 mm in eastern Australia)

var. *cyperophylla*

Acacia cyperophylla var. *omearana* Maslin, var. nov.

Type: Pilbara region, Western Australia, 31 March 1984, K. Newbey 10094 (holo: PERTH; iso: AD, BRI, CANB, DNA, G, K, MEL, MO, NSW, NY, Z).

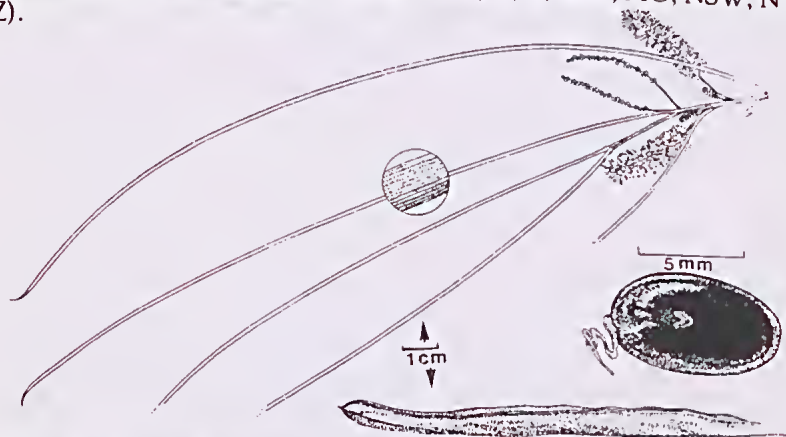


Figure 1. *Acacia cyperophylla* var. *omearana*. A. Pendulous flowering branchlet with magnification of phyllode showing very fine nerves and few hairs. B. Seed showing reduced aril. C. Legume.

A drawn from K. Newbey 10094 (the type); B & C from P. Ryan s.n. (PERTH 00165182).

A var. *cyperophylla* differt ramulis et phyllodiis pendulis.

Shapely trees 4-10 m tall, dividing into a few main trunks at or near ground level, the crowns spreading to 4-8 m across. Bark "Minni Ritchi", brilliant orange to orange-brown on trunks and upper branches and exfoliating in thin, narrow shavings which curve retrorsely from each end, old bark grey and persisting as a stocking around the base of the main trunks for a distance of about 1-2 m above the ground. Ultimate branchlets pendulous, slender, terete, glabrous, without "Minni Ritchi" bark. Phyllodes slender, terete to sub-terete, a few almost flat, 11-22 cm long, 1-1.5 mm wide, not rigid, mostly shallowly incurved, a few more or less straight, sparsely +/- appressed-puberulous, dull light green; finely multistriate, the nerves close together, scarcely raised, obscure (observe at x 10 mag.), narrowed at apex into an acute, +/- pungent point. Peduncles 5-10 mm long. Spikes sub-dense to interrupted, 1.5-3 cm long, mid-golden. Bracteoles minute. Flowers 5-

merous. *Calyx* 1/2-2/5 length of petals, gamosepalous, very shortly divided into triangular, rather sparsely fimbriolate, non-thickened lobes, calyx tube nerveless and glabrous. *Petals* c. 1.5 mm long, glabrous. *Pods* linear, 4-13 cm long, 7-9 mm wide, +/- sub-woody, straight or slightly curved, flat, straight-edged or slightly constricted between seeds, glabrous, obscurely longitudinally nerved or wrinkled, margins flattened and 1-2 mm wide on each valve. *Seeds* longitudinal in the legume, oblong to elliptic, 7-10 mm long, 5-6 mm wide, flat, dark brown except areolar area often yellowish, slightly shiny; areole sub-central, "v"- or "u"-shaped, open towards the hilum, c. 1 mm long and 0.5 mm wide; funicle slightly expanded into a small aril.

Distribution. North-west Western Australia in the Fortescue Botanical District (1: 250 000: F51-05). Known from only a single population in the eastern Pilbara, north of the Hamersley Range.

This locality is well north of the main occurrence of var. *cyperophylla* in W.A. which is mostly restricted to watercourses south of the Hamersley Range.

Other specimens seen. Type locality, D. O'Meara s.n. (PERTH 00165190 & 00875899), P. Ryan s.n. (PERTH 00165174, 00165182, 00165247 & 00165255), L. Thomson LXT 1151 (PERTH).

Habitat. Grows along drainage lines in variably-drained, stony, skeletal, sandy alluvium (pH 6-7) within *Eucalyptus camaldulensis* Open Low Woodland.

Affinities. The main characters which distinguish var. *omearana* from the typical variety of *Acacia cyperophylla* are its pendulous branchlets with slender, weeping phyllodes. This distinctive habit (which is the same as in some forms of *Acacia aneura*) is retained in cultivated plants resulting from seeds gathered in the wild.

The new variety is related to another "Minni Ritchi" taxon (of uncertain rank but which may ultimately prove to be a variety of *Acacia cyperophylla*) which is known from only a single granite hill in the eastern Pilbara (about 100 km to the NW of var. *omearana*). Additional to its habitat, this taxon can be readily distinguished from var. *omearana* in the field by its non-pendulous phyllodes and branchlets and its trunks which lack the basal stockings of old grey bark.

Common name. "Weeping Red Mulga" or "Omeara's Red Mulga" are suggested as suitable vernacular names for this variety. "Red Mulga" should be retained for the typical variety.

Cultivation. On account of its brilliant orange to orange-brown "Minni Ritchi" bark and its willow-like pendulous foliage this new variety has enormous horticultural potential as an ornamental for inland areas.

Conservation status. The only known population of var. *omearana* contains less than 100 plants. The population extends for about 1 km along a seasonally dry watercourse and occurs in an area of extensive mining and exploration activity. Therefore, based on current information the new variety is classified as 2E(k) using the criteria of Briggs and Leigh (1988). Furthermore, it has been placed on the the Department of Conservation and Land Management's Priority Flora List as a Priority 1 taxon. This means that it is in need of survey in order to assess whether or not it should be placed on the State's Declared Rare Flora Schedule.

Etymology. Named after Denis O'Meara who, around 1980, drew my attention to this spectacular plant. Denis has undertaken a number of surveys to determine the geographic range of the new variety. He has successfully brought it into cultivation in his extensive native plant arboretum at Marble Bar.

ACKNOWLEDGEMENTS

The people whose specimens are cited above are gratefully acknowledged for providing field information, photographs and specimens of this new variety. Margaret Pieroni is thanked for providing the illustration and Diana Corbyn for the Latin diagnosis.

REFERENCES

- BENTHAM, G. 1864. *Flora Australiensis*, vol. 2 (Lovell Reeve & Co.: London.)
- BRIGGS, J. & LEIGH, J.H. 1988. Rare or Threatened Australian Plants, 1988 Revised Edition. Australian National Parks & Wildlife Service Special Publication no. 14.
- BROOKER, M.I.H. & HOPPER, S.D. 1982. New subspecies in *Eucalyptus caesia* and in *E. crucis* (Myrtaceae) of Western Australia. *Nuytsia* 4(1): 113-128.
- FITZGERALD, W.V. 1904. Notes on some West Australian species of *Acacia*. *J. W. Austral. Nat. Hist. Soc.* 1: 44-52.
- PRITZEL, E. IN DIELS, L. & PRITZEL, E. 1904-1905. *Fragmenta Phytographiae Australiae occidentalis*. (Wilhelm Engelmann: Leipzig.)
- MAIDEN, J.H. 1917. *Acacia cyperophylla*, The Red Mulga. The Forest Flora of New South Wales 6: 272-277 (Govt. Printer: Sydney.)
- MASLIN, B.R. 1977. Studies in the genus *Acacia* (Mimosaceae) — 6. Miscellany. *Nuytsia* 2(3): 145-161.
- MASLIN, B.R. 1980. *Acacia* (Leguminosae-Mimosoideae): a contribution to the flora of Central Australia. *J. Adelaide Bot. Gard.* 2(4): 301-321.
- MASLIN, B.R. & PEDLEY, L. 1982. The distribution of *Acacia* (Leguminosae: Mimosoideae) in Australia. Part 1. Species distribution maps. *W. Austral. Herb. Res. Notes* No. 6: 1-127.
- PEDLEY, L. 1978. A revision of *Acacia* Mill. in Queensland. *Austrobaileya* 1(2): 75-234.

SEEDLINGS OF AUSTRALIAN CASUARINAS I. GERMINATION

By YEE H. HWANG^A and JOHN G. CONRAN^{B*}

Department of Ecology and Environmental Biology, Monash University,
Clayton, Vic. 3168.

A Present address: Division of Research, Natural Science Museum,
Taichung, Taiwan.

B Present address: Department of Botany, The University of Adelaide,
G.P.O. Box 498, Adelaide, S.A. 5001. *Correspondence author.